



**CONFERENCE ON SUSTAINABLE DEVELOPMENT OF
TOURISM IN ISLANDS, 11-13 Sep 2013 Reunion Island**
Session 4: Efforts Questioned? Impacts and Challenges of Climate
Change

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1. Impacts and Challenges

- Tourism is responsible for 5% of the World's CO2 emissions
- Small Islands contribute <1% of greenhouse gas emissions
- Islands will be the most to receive the brunt of climate change: personal safety, travel costs, accessibility and seasonal tourism demand, operating costs, infrastructure damage, water availability, biodiversity loss, coastal erosion etc.

2. Efforts

- Brundtland Report, 1987: Sustainable Development Agenda
- Earth Summit, Rio, 1992-Agenda 21: 3 pillars of Sustainable Development are Economic Development, Social Equity and Environmental Protection
- From Rio to Rio+20- Green Economy

3. Tanzania

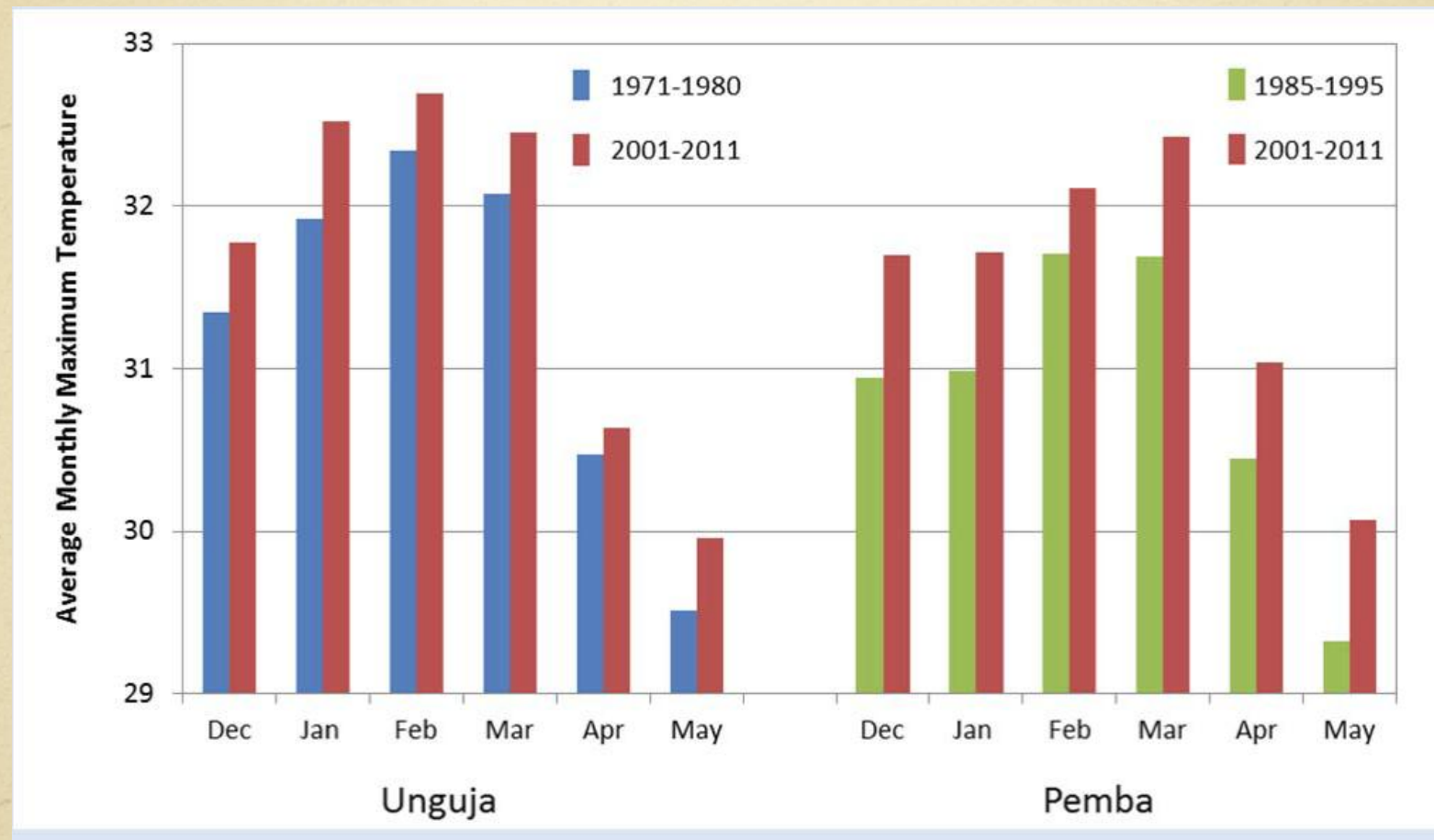
- Tanzania (including Islands of Zanzibar and Pemba) is located on The East African Coast between Latitudes 1-11 South and Longitudes 30-40 East with an area of 945,234 Sq.Km and the population of 45 Mil (2012)



4. The Climate of Zanzibar is changing

- The livelihoods of people of Zanzibar are associated directly with climate sensitive activities such as agriculture and tourism.
- The Islands are being affected by extreme weather i.e. floods, storms, droughts etc.

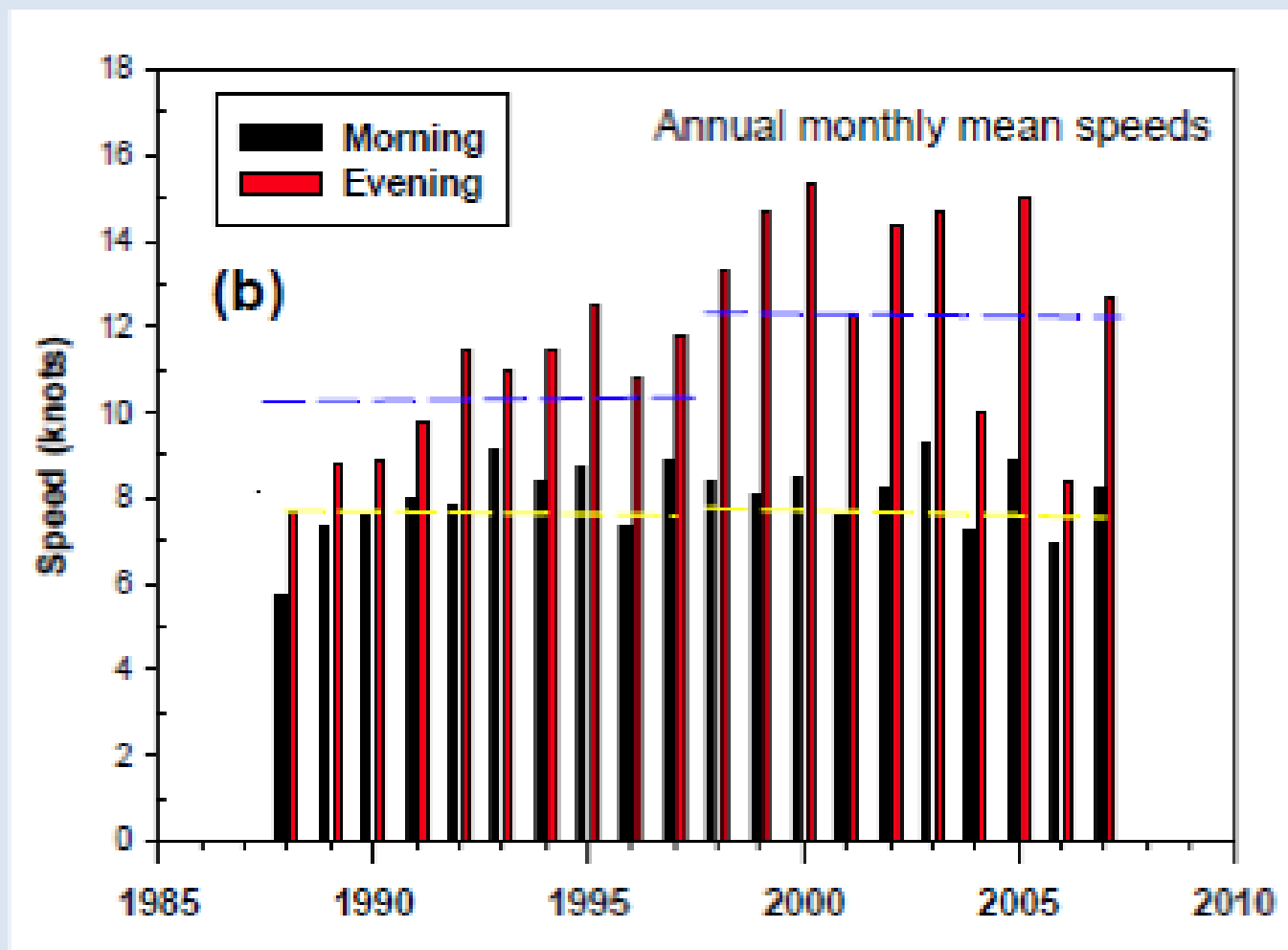
5. Rise in Temperature



- Temperatures have rising over the past 30 yrs

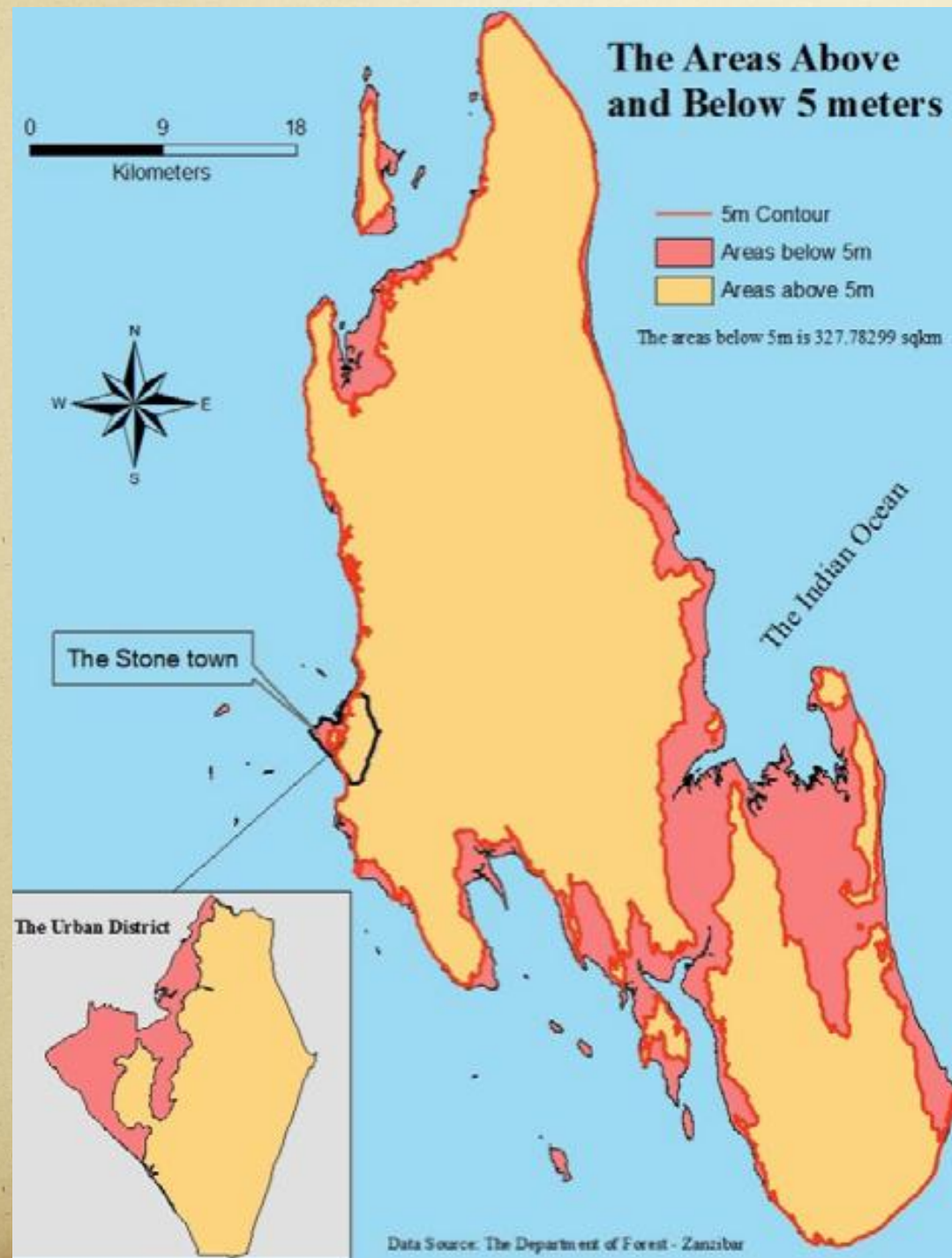
6. Wind speeds are on the rise

Data are shown below on the changes in annual monthly mean speeds and monthly high water levels over the past twenty or so years. This shows strong increases, reflecting changes that are highly relevant to coastal impacts.



Annual monthly mean wind speeds for Zanzibar

7.High Water Level Trends



8. Extremes in Precipitation, wave action and beach erosion

- Heavy rainfalls in 2011 led to floods with major infrastructure damage in Pemba
- Low and erratic rainfall in 2006-7 led to major crop failure
- Similar effects on the Mainland Coast. In Kilwa , the remains of two major ports of 13th to 16th century are threatened by climate change

9. Efforts Questioned?

- Economic Growth in Developing Countries is following the resource-intensive model like Developed Nations
- A revolution in lifestyle? Need for change at consumer level in developed countries and the growing middle class in developing countries
- Developing countries need more adaptive capacity and cannot afford the cost on their own. Significant ODA will be required.

Thank You